



Received on 05-03-2025

Reviewed on 25-08-2025

Paper Accepted on 25-12-2025

Exploring User Perceptions in Academic Libraries: A Comprehensive Review of Trends, Challenges and Future Directions

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Abstract

This review study examines the user perceptions of the academic libraries that users have concerning what services they value, the problems they face, and their expectations in the fast-digitalising world from 2015 to 2024. Following a relevance check, all studies that were related to user satisfaction, service quality, technology adoption, and the impact of both physical and virtual spaces were selected. The analysis was conducted thematically so as to find common patterns and changing views. Findings indicate that users are allowed to have a blend of both digital and traditional resources, with reliable access to e-resources, use of friendly platforms, and supportive staff. Mobile application usage, emerging digital literacy initiatives, inclusive practices, and innovations in technology, including AI-powered solutions and personalisation, are also among the key trends. There have been challenges in the fields of bridging digital divides, enhancing usability, and harmonizing physical and virtual library experiences. This review helps provide a synthesized opinion on how perceptions are changing among users of academic libraries. It puts emphasis on user-centred, technology-supported, and inclusive methods, which are best practices to gain insight into librarians, researchers, and policymakers to enhance the pertinence of libraries to academic societies.

Keywords: Academic Library, Library Services, User Engagement, User Perception, User Satisfaction

1. Introduction

Customer satisfaction is an essential component of any organization, including academic institutions, and is crucial in determining its continuation in today's global competition. The

academic library accounts for the learning, teaching, and research support of the academic institution (Adeniran and Oyovwevotu, 2019). One of the main objectives of academic libraries is to

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Francis, F. & Chinnsamy, K. (2025, December). Exploring user perceptions in Academic Libraries: A comprehensive review of trends, challenges and future directions. *College Libraries*, 40(4), 61-68



fulfil the intellectual requirements of the user community they serve. Such a community includes: faculty, researchers, staff, and students (Lalrokhawma and Verma, 2023). Over the past few decades, the role of academic libraries has evolved from being primarily a repository of physical books to becoming dynamic centers of learning and research. Due to the new technological advancements and changes in the way users access information, academic libraries are facing issues in meeting the changing demands of their diverse user groups (McRostie, 2016).

To satisfy the ever-changing needs of user groups of the academic library, it is very important that academic libraries be equipped with the necessary resources in order to meet the needs of their users. User perception is an important factor for the same, which not only reflects satisfaction levels on library services but also provides valuable feedback on other areas for improvement (Hussain and Rafiq, 2024). User perception can be in terms of positive and negative perceptions. Library services in users' positive perceptions can enhance user engagement and increase library usage, while negative perceptions can lead to decreased utilization of library resources. As libraries strive to provide high-quality services, analysing the trends and factors involved in shaping user perceptions has become more important than ever (Anyanwu and Akande, 2023).

This article presents a comprehensive review of the literature on user perceptions in academic libraries. The review examines the current trends in library services, the challenges libraries face in meeting user expectations, and potential future development. By synthesizing findings from various studies, this paper aims to provide insights into how academic libraries can better align their services with user needs and expectations.

2. Objectives of the Study

This present study aims to:

- Examine and evaluate current trends in user perceptions of academic libraries.
- Identify the main challenges academic libraries

face in meeting the diverse needs of their users.

- Explore potential future directions for academic libraries, focusing on user-centred innovations and inclusivity.
- Summarize findings from various studies and discuss their implications for library practices and future research.

3. Research Methodology

This study follows a systematic literature review approach to analyze research on user perceptions in academic libraries. It includes studies published between 2015 and 2024 to ensure relevance and up-to-date insights.

3.1. Inclusion and Exclusion Criteria

The review includes studies that specifically address user perceptions of academic libraries, covering aspects such as user satisfaction and behaviour, Engagement with library resources (both physical and digital), the integration of technology into library services, interactions between users and library spaces, services, and technologies. Studies that do not focus on academic libraries or do not directly examine user perceptions were excluded from this review.

3.2. Data Extraction and Analysis

Key details were extracted from each selected study, including research objectives, methodology, sample size, and major findings. These studies were then categorized into thematic areas such as Digital library services, User satisfaction, Service quality, Library space utilization and Mobile library applications. By analyzing these themes, the review identifies broader trends in user perceptions and the challenges libraries face. The findings were synthesized to highlight common patterns and provide recommendations for future library improvements.

3.3. Quality Assessment

To ensure credibility, studies were assessed based on their methodological rigour. The evaluation criteria included clarity of research



design, strength of data collection methods and consistency and reliability of findings. Studies with well-defined research questions, strong data collection processes, and sound analytical methods were prioritized for inclusion in this review.

4. Analysis and Discussion

The review includes studies that came out between 2015 and 2024 as obtained using key search terms in major academic databases, such as user perceptions, academic libraries, library services, and digital libraries. Following a relevance check, all studies that were related to user satisfaction, service quality, technology adoption, and the impact of both physical and virtual spaces were selected.

4.1. Key Trends in User Perception

4.1.1. The Transition to Electronic Libraries and Online Resources

In recent decades, due to the rapid growth of online and digital technologies, user behavior and academic library user perceptions have changed a lot. Users increasingly depend on scholarly resources through digital interfaces. It results in greater reliance on e-books, online journals, and databases. In the study by Abdul Kadir et al. (2023) and Ahmad (2016), it can be observed that faculty staff and learners expect academic libraries to provide smooth access to digital material, mirroring a broader societal trend toward the digitization of education. This increased usage of digital resources necessitates the transformation of academic libraries, which not only build their digital holdings but also ensure they are user-friendly and integrated into academic workflows.

The study by Alotaibi et al. (2023) underscores the value of digital libraries in improving access to scholarly resources, with users confirming the convenience of 24/7 access as a significant advantage. Similarly, Alharbi (2016) in his study highlights the importance of digital resources for academic success, particularly among students in remote learning environments. Also, Nyantakyi-Baah (2016) emphasises in his study

that the demand for digital libraries for scholarly resources has led to a shift in how academic libraries allocate their budgets, with a stronger focus on digital preservation and the sustainability of online collections. As digital transformation continues, academic libraries must ensure their digital resources are both extensive, user-friendly, and easily accessible, aligning with the academic needs of their users.

4.1.2. The Increasing Role of Mobile Library Applications

The growing adoption of mobile technologies is another important key trend in academic libraries. Mobile library applications provide users with the convenience of accessing library catalogues to find the available resources, borrowing and returning books, reading e-books, and utilizing library research tools from any location. According to Yoon (2016) and Dar (2019), for faculty and students, mobile applications have become a primary way to engage with library services. These applications allow users in real-time to interact with the library, checking resource availability, accessing digital content, and receiving notifications directly on their mobile devices. By offering mobile reference support, personalized reading recommendations, event notifications, etc, the academic libraries are enhancing user engagement and accessibility.

The study of Gariepy (2019), which highlights that integrating mobile technologies into library systems has significantly improved user engagement and satisfaction, also supporting the trend of using mobile applications. It is emphasized in the study by Yoon (2016) that mobile applications are particularly beneficial in higher education, where students increasingly rely on smartphones and tablets for research and information access.

4.1.3. User-Centred Design in Library Spaces

The shift toward user-centered library design is another trend in terms of user perception. In user-centered library design, libraries focus on creating flexible spaces that accommodate diverse learning and research needs. Nowadays, academic libraries are increasingly incorporating



collaborative workspaces alongside areas for independent study, catering to different learning styles (Ayiah and Tamakloe, 2023). Also, the academic libraries are transforming into collaborative hubs, integrating features such as multimedia rooms, 3D printing facilities, and interactive whiteboards to foster innovation (Azizah and Rahmi, 2023). These user-centered spaces represent a shift toward designing libraries as dynamic, interactive learning environments rather than solely spaces for solitary study.

The study by Jilani et al. (2025) supports this trend, stating that library space design should be guided by user needs assessments to accommodate students, faculty, and staff. The trend toward multi-functional spaces is further emphasized by Garipey (2019), who notes in his study that academic libraries increasingly offer adaptable spaces that can transition between individual study areas, collaborative workspaces, and multimedia production zones.

4.1.4. AI & Library Services Automation

Artificial Intelligence (AI) and machine learning are playing an increasingly significant role in the evolution of academic libraries. AI-powered tools such as chatbots, virtual assistants, and personalized recommendation systems are transforming how users interact with library services. This is underlined in the study by Fu (2021), which highlights the expanding role of AI in library systems, including chatbots for user assistance, AI-driven research recommendations, and predictive analytics for resource management. Libraries can offer more personalized services and better anticipate users' information needs by incorporating AI, which ultimately improves user engagement and satisfaction.

Further supporting this, Alharbi (2016) describes how AI-driven systems assist in delivering personalized research guidance by analyzing users' research histories and providing tailored recommendations for academic materials, including journals, articles, and books. The implementation of AI in academic libraries aims to create a more personalized and engaging user

experience, increasing both user satisfaction and retention.

4.1.5. Open Access and Open Educational Resources (OER)

Open access (OA) and open educational resources (OER) are rapidly transforming the way academic resources are shared and accessed. Libraries are increasingly providing access to OA journals, research articles, and digital learning materials that are freely available to the public. As Alotaibi et al. (2023) emphasize, students and researchers appreciate the availability of open access resources, as it democratizes access to academic knowledge and reduces the cost burden on users. The rise of OER is similarly changing the academic landscape, allowing for the free use, modification, and distribution of educational content. Libraries are at the forefront of curating and facilitating access to these resources, offering value to users by promoting equitable access to knowledge.

Research by Nyantakyi-Baah (2016) and Garipey (2019) also highlights how open access publications are increasingly seen as essential for global collaboration and knowledge-sharing, especially in fields like medicine, science, and engineering. Open access resources remove barriers to research dissemination, particularly in developing regions where high subscription costs can limit access to academic resources.

4.1.6. Libraries as Makerspaces and Innovation Hubs

In recent years, academic libraries have increasingly transformed into makerspaces and innovation hubs. These spaces allow users to experiment with new technologies, such as 3D printers, VR setups, and multimedia production tools. Gattagoni Rama Devi and Dhaval Bhatt (2024) describe the evolution of academic libraries into places of hands-on learning and creativity, where students and faculty can engage in activities such as prototyping, product design, and digital media production. The transformation of libraries into innovation hubs reflects a growing desire for interdisciplinary collaboration and a recognition



that academic libraries should support not just information access, but also creative and practical problem-solving.

Libraries are also supporting entrepreneurship by offering spaces for startup incubators and innovation labs. Research by Tiwari et al. (2024) suggests that many libraries are becoming key contributors to local and global innovation ecosystems by providing entrepreneurs with the resources, tools, and mentoring needed to launch new ventures. These spaces not only support creative and technological innovation but also help bridge the gap between academia and the wider community by encouraging the development of new ideas with practical applications.

4.2. Challenges in Meeting User Expectations

4.2.1. Diverse User Needs and Expectations

As academic libraries serve a wide variety of users, including undergraduate students, graduate students, faculty members, and staff, one of the biggest challenges is meeting the diverse needs of these groups. Alotaibi et al. (2023) note that while students generally seek digital resources and convenient access to library services, faculty members often require specialized research materials and databases. Balancing these differing needs can be difficult, particularly when libraries have limited resources or must prioritize certain services over others. Libraries must find ways to tailor their offerings to satisfy a broad range of users while maintaining quality across all areas of service.

4.2.2. Balancing Digital and Physical Resources

While digital resources have become increasingly important, the demand for physical resources and spaces has not diminished. Many users still rely on traditional library functions, such as access to physical books, study spaces, and face-to-face interactions with library staff. As Kekana & Kheswa (2020) point out, students continue to value physical library spaces for studying, socializing, and collaborating. However, balancing the demand for digital resources with the need for physical space remains a significant challenge for many

academic libraries. Libraries must invest in both digital and physical infrastructure to ensure they meet the needs of users who rely on both types of resources.

4.2.3. User Perception and Evaluation Tools

Accurately assessing user satisfaction and perceptions is another challenge for academic libraries. While libraries commonly use surveys and feedback forms, these methods often fail to capture the complexity of user experiences. For example, Osborne and Cox (2015) highlight that traditional surveys may not fully assess the impact of new technologies, such as next-generation OPACs, on user behavior and engagement. Libraries need to implement more nuanced, qualitative evaluation methods, such as ethnographic studies and user experience (UX) research, to better understand how their services are perceived and used.

4.2.4. Financial Constraints and Resource Allocation

Many academic libraries face financial constraints that impact their ability to adopt new technologies, expand digital collections, or redesign physical spaces. As academic libraries become increasingly reliant on digital resources, the costs associated with acquiring licenses for journals, books, and databases are rising. The expansion of digital collections has led to increased subscription fees for electronic journals, databases, and e-books, which can strain library budgets. Libraries must balance these increasing costs with the need to maintain and improve their physical infrastructure, such as study spaces, computers, and print collections, which continue to be valued by many users (Nyantakyi-Baah, 2016).

As noted by Alharbi (2016), libraries are also facing increased competition for resources within their institutions, as many universities are simultaneously funding other digital initiatives, research grants, and infrastructure projects. Moreover, libraries must continually invest in staff training to ensure that library personnel can effectively support new digital services and



technologies Dahan et al., 2016). This comprehensive need for investment in both human resources and technological infrastructure, combined with decreasing budgets, requires libraries to adopt more strategic approaches to resource allocation.

4.3. User-Centred Innovations and Future Directions

4.3.1. Technology and Personalization

As academic libraries continue to integrate technology into their services, the trend toward personalization is becoming more pronounced. Libraries are increasingly adopting AI and machine learning algorithms to offer personalized recommendations, customized content, and user-specific services (Fu, 2021). By leveraging user data, libraries can tailor their offerings to meet the specific preferences of individual users, enhancing engagement and satisfaction.

4.3.2. Inclusive Library Services for Diverse Users

Inclusivity remains a central focus for future library development. As libraries expand their digital offerings, there is also a growing recognition of the need to provide equitable access for users with disabilities. Azizah and Rahmi (2023) highlighted that academic libraries are beginning to implement assistive technologies and design inclusive spaces to accommodate users with visual, hearing, or cognitive impairments. The future of academic libraries will likely see a stronger focus on creating accessible resources and spaces that ensure equal opportunities for all users.

4.3.3. Sustainability and Hybrid Library Models

Sustainability is an emerging concern for academic libraries, especially in developing countries where resources may be limited. Tanzin and Atikuzzaman (2024) noted that many libraries are exploring hybrid models that combine physical and digital services to provide a more sustainable, cost-effective approach. These models allow libraries to serve a wider range of users while

managing their resources more efficiently. Sustainability will likely be a key factor in shaping the future of academic libraries, with a focus on reducing costs, conserving resources, and maximizing user engagement.

5. Conclusion

This review has gathered evidence on academic library user perceptions and synthesized it to provide an overall picture of how services, spaces, and technology are perceived and evaluated by the academic community. The novelty of a user-focused perspective and going beyond conventional service assessment to reflect on the modern, evolving expectations of faculty, students, and researchers in the digital age is a feature that the work highlights by bringing together various studies published in recent years.

The key conclusions show that although users still appreciate physical libraries in terms of providing physical resources and spaces to study, the demand for digital services, the ability to access proximal resources and technologies, technology-enriched learning environments, and welcoming and caring staff is becoming extremely significant. These trends, including the growth of mobile applications, tailor-made services, digital literacy tutoring, diversity programmes, and the embracement of AI-based tools, indicate some of the innovative paths libraries are undertaking. Meanwhile, issues such as digital and usability gaps, the difficulty of finding a balance between physical and online environments, remain working in the background and may signal to the observers where the focus should be.

In the future, academic libraries should adopt user-centered innovations that will combine emerging technology with human touch, all the same time making sure that the innovations are accessible and inclusive to many groups of users. In the future, libraries may serve not merely as storehouses of knowledge but also as networked, interdisciplinary, responsive environments to involve the audience in lifelong learning and research studies and turn the libraries into community hubs. Further, the findings of this



review can provide advice in other fields, including education technology, digital humanities, and knowledge management, showing how perceptions among users can influence a given information system design and delivery.

The importance of this work, therefore, lies in the fact that it supports the importance of users in the determination of the success of academic libraries. Among other aspects, expanding the role and responsibilities of libraries and continuously adjusting them to the emergent needs enables the organization to maintain its status as a critical pillar of academic institutions in a quickly evolving world.

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